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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,344	12/20/2001	Hamish Alexander Nigel Kennedy	BALD118418	9622

26389 7590 03/27/2003

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EXAMINER

LEE, PATRICK J

ART UNIT	PAPER NUMBER
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2878

DATE MAILED: 03/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/027,344

Applicant(s)

KENNEDY, HAMISH ALEXANDER
NIGEL

Examiner

Patrick J. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 5, 7-9, & 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Makihiro et al 4,410,278.

With respect to claims 1 & 7-9, Makihiro et al disclose an apparatus for appearance inspection comprising of light sources (31, 201, 50, 50', 53, 56) that shine light onto cylindrical pellet (1) that moves along chain conveyer (10), while being rotated by rollers (11a & 11b). Sensors (36, 57) serve as an analyzing means to receive light reflected from pellet (1) and aid in the processing of the information to determine whether the pellet (1) passes inspection. Mirror (55) and lenses (32, 34-35, 54, 56) along with light guides (51 and 51') serve as tracking means to help track a respective product during the movement.

With respect to claims 5 & 14, Makihiro et al teach the use of two groups of light sources (one at position Q, the other at position R) in order to track the product sequentially.

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4. Claims 1 & 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Long 4,351,437.

With respect to claims 1 & 8-9, Long teaches a method and apparatus for the inspection of potatoes (11) that move along roller table (12). Cylindrical mirror (16) as a tracking means reflects light from light source (15) onto potatoes (11). Light reflects from the potatoes and hits mirror (17), which then directs the light to camera (18) as a detection means. Camera (18) then sends a signal to electronic signal processing unit (20). Camera (18) coupled with electronic signal processing unit (20) serve as a detector/analyzing means for sorting the good potatoes from those that are unsatisfactory.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 4, & 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Makihiro et al 4,410,278 in view of Majewski et al 4,994,661.

With respect to claims 2 & 10, Makihiro et al teach the use of half mirror (55), but do not disclose the mirror as being able to move. Majewski et al disclose an apparatus for the stabilization of a laser beam with mirrors (26 & 28) controlled by deflection means (22 & 24). To incorporate the mirror system taught by Majewski et al into the tracking system taught by Makihiro et al would have been obvious as doing so would

not only allow for control of the laser beam, it would allow for additional areas of the object in question to be inspected.

With respect to claims 4 & 11, Makihiro et al does not teach the use of a plurality of mirrors rotatable around a common axis. However, such is known and would have been obvious to one of ordinary skill as modifying the teachings of Makihiro et al accordingly would allow for the apparatus to illuminate all areas of the object while being able to keep the light source and sensors/analyzer disposed substantially in the same place.

7. Claims 3, 6, & 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Makihiro et al 4,410,278 in view of Schmutz 5,424,533.

With respect to claims 3, 6, & 12-13, Makihiro et al teach the use of light source (31) and image sensor (36) located opposite from each other. However, Makihiro et al do not disclose the use of a light switching means and multiple collectors of light. Schmutz teaches an optical switch (80) that is able to dispose light sources (120 & 125) and detector assemblies (90 & 105) in relatively close contact. To modify the teachings of Makihiro et al by those of Schmutz would have been obvious to one of ordinary skill as doing so would have allowed the size of the apparatus to decrease and to perhaps use fewer light sources, resulting in lower energy consumption of the device, while not sacrificing the imaging performance of the device.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Conway et al 3,930,994 teach a method and means for inspection and sorting of produce.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J. Lee whose telephone number is (703) 305-3871. The examiner can normally be reached on Monday through Friday, 8:00 am to 5:30 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (703) 308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-9558 for regular communications and (703) 306-5511 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Patrick J. Lee
Examiner
Art Unit 2878

PJL

March 19, 2003


DAVID PORTA
SUPERVISORY PATENT EXAMINER
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